

REMARKS

Reconsideration and allowance of this application are respectfully requested. Claims 1-27 remain in this application as amended herein. Claims 28-31 are added. Accordingly, claims 1-31 are submitted for the Examiner's consideration.

Claim 2 has been amended to correct a minor error.

The formal drawings submitted September 19, 2003 have been amended to correct minor errors so that they conform with the originally filed drawings of the present application.

In the Office Action, the Examiner rejected claims 1-3, 13, 20 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Gay (U.S. Patent No. 5,467,455). It is submitted, however, that the claims are patentably distinguishable over Gay.

The Gay patent describes a dynamic bus termination circuit that requires two bipolar transistors and two additional components, all of which are connected in series. Specifically, a first bipolar transistor is connected at its collector terminal to a Vdd line and is connected at its emitter terminal to a terminal of a first component, the first component is connected via a common node to a terminal of a second component, the second component is connected at another terminal to the collector of a second bipolar transistor, and the bipolar transistor is connected at its emitter terminal to a ground terminal. Gay also describes that the two components may be single resistors or may be "entire circuits" comprised of bipolar transistors, N channel transistors, P channel transistors and other active or passive devices. (See Fig. 2; and col. 5, line 47 - col. 6, line 33).

Though the Examiner acknowledges that Gay does not specifically show MOSFET transistors, the Examiner contends that Gay teaches modifying the bipolar transistors to be MOSFETs and refers to col. 6, lines 15-30 of the patent. However, Gay

describes that the two components may be circuits comprised of MOSFETs and other active or passive devices. The reference does not suggest modifying the bipolar transistors in this manner.

The Examiner also argues that it would have been obvious to one of ordinary skill in the relevant art to have used MOSFETs in place of the bipolar transistors taught by Gay for the purpose of making a dynamic termination circuit. Gay, however, shows a bipolar transistor, a component, another component, and another bipolar transistor connected in series. The bipolar transistors are not coupled to each other. Thus, even if MOSFETs are substituted for the bipolar transistors, the MOSFETs would each be coupled to a component rather than coupled to the other MOSFET so that the MOSFETs are not coupled to each other in series. Moreover, Gay only describes using MOSFETs to comprise the components, as noted above, and does not suggest substituting a single MOSFET for both a bipolar transistor and a component.

Therefore, Gay does not suggest:

an active termination circuit having first and second MOSFETs of the same type coupled to each other in series across a Vdd node of a first source potential and a Vss node of a second source potential, the at least one I/O node being coupled to a common node between the first and second MOSFETs

as called for in claim 1.

Additionally, because Gay does not suggest first and second MOSFETs for the reasons set out above, the patent does not suggest:

a control circuit operable to bias the first and second MOSFETs such that they exhibit a controlled impedance at the common node

as defined in claim 1.

It follows that Gay does not suggest the integrated circuit defined in claim 1, and claim 1 is patentably distinct and unobvious over the reference.

Independent claim 13 is directed to an active signal termination circuit in which the source terminal of a first N-channel MOSFET is coupled to a common node, and the drain terminal of a second N-channel MOSFET is also coupled to the common node. As described above regarding claim 1, Gay does not suggest using MOSFETs in the claimed manner and does not suggest two transistors having terminals coupled to the common node. Therefore, claim 13 is patentably distinguishable over Gay at least for the same reasons.

Independent claim 20 is directed to an active signal termination circuit in which the source terminal of a first P-channel MOSFET is coupled to a common node, and the drain terminal of a second P-channel MOSFET is also coupled to the common node. Therefore, claim 20 patentably distinguishable over Gay for at least the same reasons set out above.

Independent claim 27 defines first and second MOSFETs that are *coupled to each other* in series. Claim 27 is therefore patentably distinguishable over Gay for at least the reasons described above regarding claim 1.

Accordingly, the withdrawal of the rejection under 35 U.S.C. § 103 is respectfully requested.

The Examiner also indicated that claims 4-12, 14-19 and 21-26 would be allowable if rewritten in independent form. Claim 4 has been rewritten in independent form and is therefore in condition for allowance. Additionally, it is submitted that claims 14-19, which depend from claim 13, and claims 21-26, which depend from claim 20, are also in condition for allowance.

New claims 28 and 29 depend from allowable claim 4 and are therefore likewise in condition for allowance. Claims 28

and 29 have limitations similar to those set out in claims 2 and 3, respectively.

New claims 30 and 31 depend from claim 27 and are patentably distinguishable over the cited art for at least the same reasons. Additionally, new claims 30 and 31 have limitations similar to those recited in claims 2 and 3, respectively.

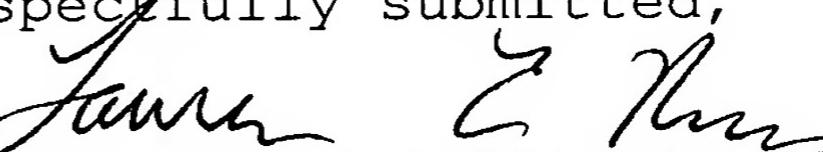
As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited. If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that the Examiner telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which the Examiner might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: November 22, 2004

Respectfully submitted,

By


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IN THE DRAWINGS

Applicants respectfully request permission to amend the formal drawing submitted on September 19, 2003 so that the formal drawings conform with the drawings originally filed with the present application. Specifically, Applicants request the following changes to the figures of the formal drawings:

In Fig. 3, at device 104, replace the legend "S" with the legend "D", and replace the legend "D" with the legend "S".

In Fig. 7, at device 104, replace the legend "S" with the legend "D", and replace the legend "D" with the legend "S".

In Fig. 12, change reference numeral "102" to "102A", and change the reference numeral "104" to "104A".

Attachment: Replacement Sheets

ANNOTATED SHEET
SHOWING CHANGES

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FIG. 3

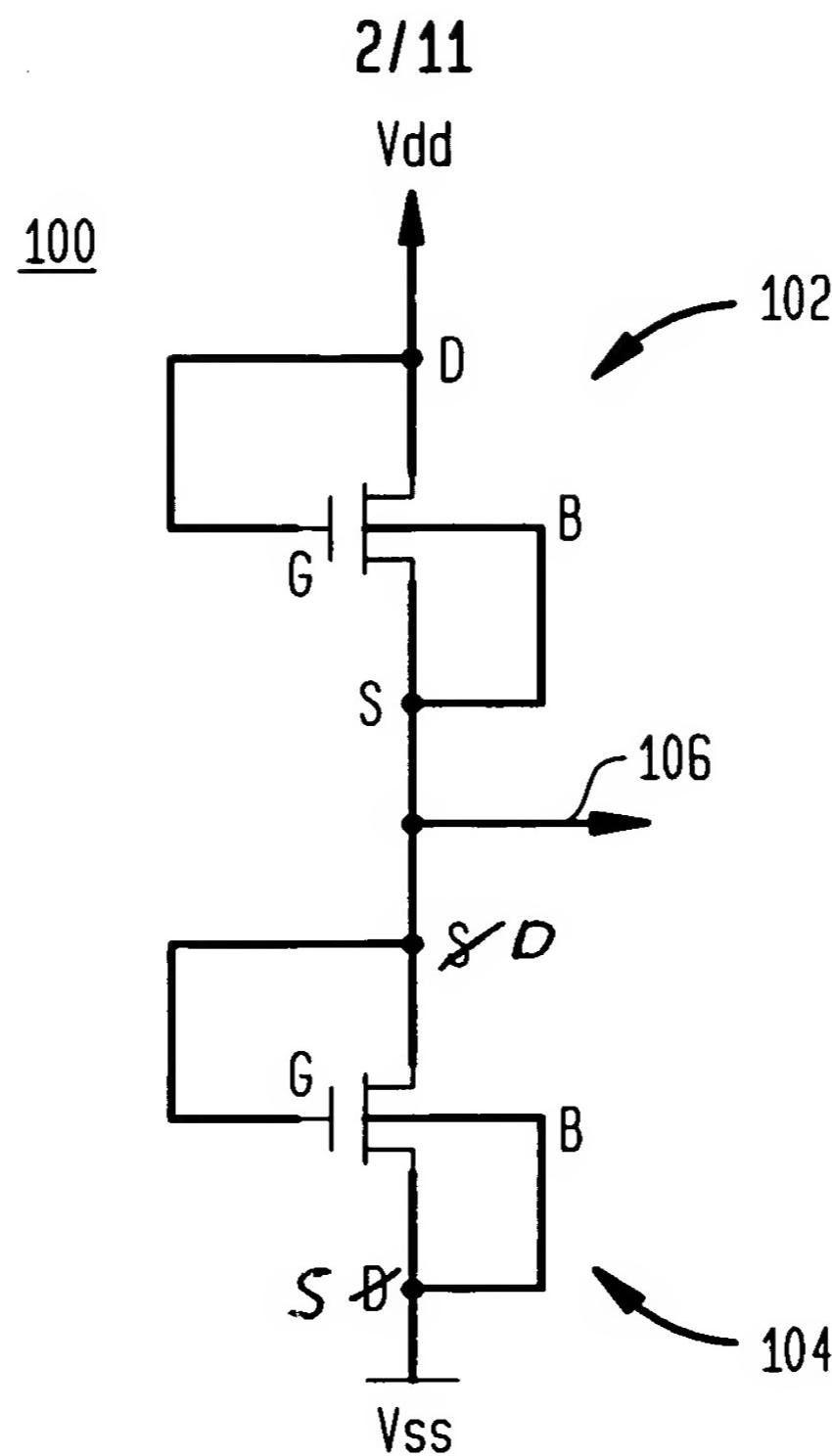
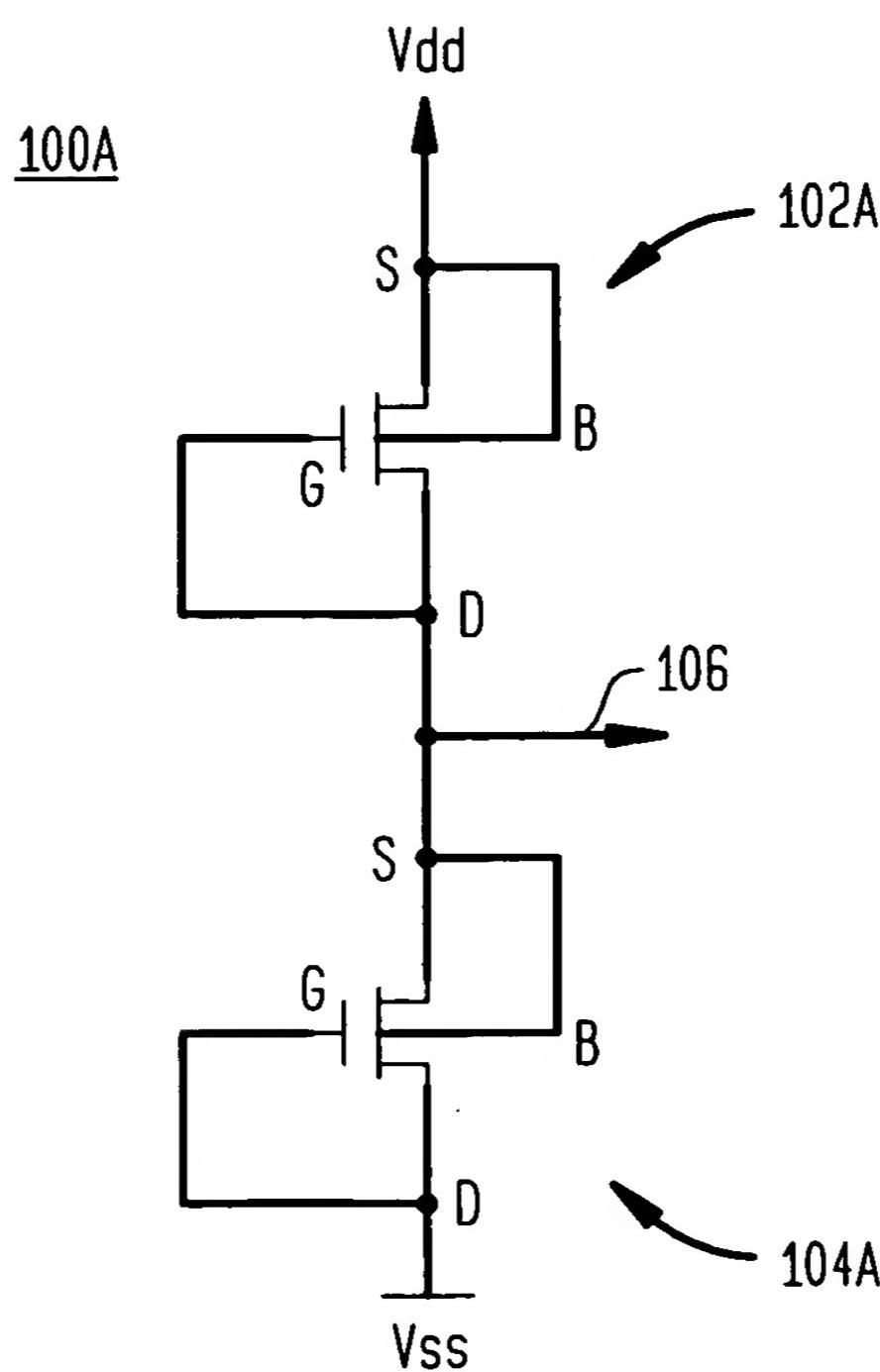


FIG. 4

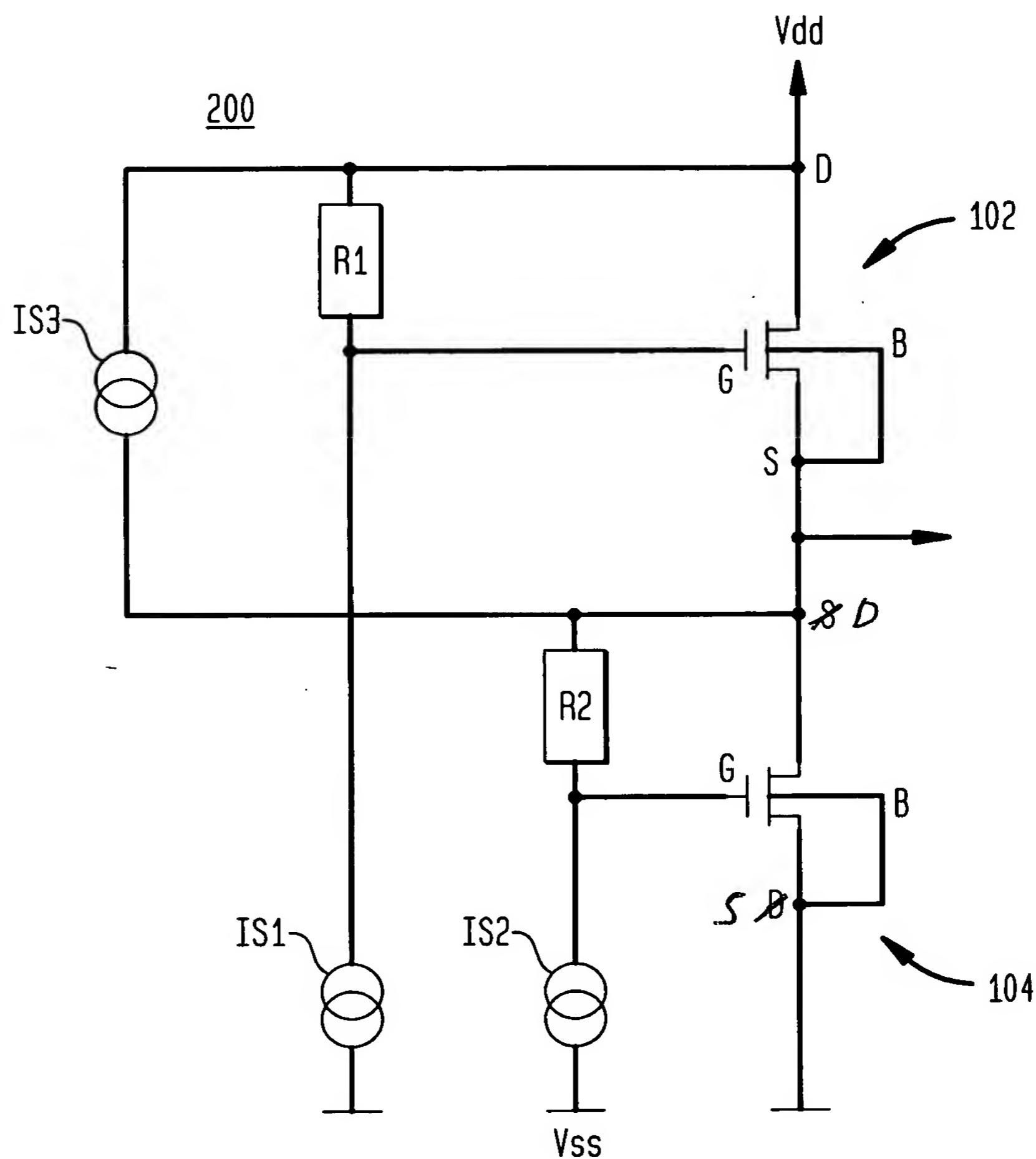


ANNOTATED SHEET
SHOWING CHANGES

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FIG. 7



ANNOTATED SHEET
SHOWING CHANGES

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FIG. 12

